The basic rule for smooth flow is that ‘**Flow is proportional to the pressure drop** \( P_1-P_2 \) **across the vessel**’

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Thus for the entire systemic circulation, the Flow, \( F \propto (P_a - P_v) \). Inserting a proportional coefficient we get Darcy's law of flow:

\[
Flow, F = \frac{(P_a - P_v)}{Resistance \ of \ entire \ circulation}
\]

**Resistance** is defined as the pressure drop needed to drive unit flow. It is equivalent to the Flow/\( (P_a-P_v) \)

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**How big are the vascular pressures?**

There is **low pressure in pulmonary circulation** and **high pressure in systemic circulation**.

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![Size of the Pressures](image-url)